AMENDMENTS TO THE CLAIMS

Please amend the claims to read as follows:

1. (Currently Amended) In a communications system having a modem pool for communicating via a communications channel, the modem pool comprising a plurality of native modems operating at steady state, a method for modem wake-up at steady-state comprising the steps of:

a) measuring modem performance of any of said native modems;

b) activating a foreign modem in said modem pool at substantially said foreign modem's maximum data rate and at a power level that is below said foreign modem's normal operational power level;

c) allocating at least one ~~NEXT~~ near-end cross-talk (NEXT) cancellation filter as a probe filter;

d) iteratively, until i) said foreign modem is operating at said foreign modem's normal operational power level, or ii) said modem performance of any of said native modems has degraded subsequent to activating said foreign modem:

d1) canceling, using said probe filter, NEXT caused to at least one of said native modems by said foreign modem;

d2) measuring modem performance of any of said native modems; and

d3) if said modem performance of any of said native modems has not degraded subsequent to activating said foreign modem, increasing said foreign modem's power level; and

e) if said modem performance of any of said native modems has degraded subsequent to activating said foreign modem, deactivating said foreign modem.

2. (Original) A method according to claim 1 and further comprising synchronizing said foreign modem to an optimal data transmission rate.

3. (Original) A method according to claim 1 and further comprising activating at least one NEXT cancellation filter to filter NEXT caused to said foreign modem by any of said native modems.

4. (Currently Amended) In a communications system having a modem pool for communicating via a communications channel, the modem pool comprising a plurality of native modems operating at steady state, a method for modem wake-up at steady-state comprising the steps of:

a) measuring modem performance of any of said native modems;

b) activating a foreign modem in said modem pool at substantially said foreign modem's maximum data rate and at a power level that is below said foreign modem's normal operational power level;

c) allocating at least one ~~NEXT~~ near-end cross-talk (NEXT) cancellation filter as a probe filter;

d) iteratively, until i) said foreign modem is operating at said foreign modem's normal operational power level, or ii) said modem performance of any of said native modems has degraded subsequent to activating said foreign modem:

d1) canceling, using said probe filter, NEXT caused to at least one of said native modems by said foreign modem;

d2) measuring modem performance of any of said native modems; and

d3) if said modem performance of any of said native modems has not degraded subsequent to activating said foreign modem, increasing said foreign modem's power level; and

e) if said modem performance of any of said native modems has degraded subsequent to activating said foreign modem, decreasing said power level of said foreign modem to a previous power level at which said modem performance of any of said native modems had not degraded.

5. (Original) A method according to claim 4 and further comprising synchronizing said foreign modem to an optimal data transmission rate.

6. (Original) A method according to claim 4 and further comprising activating at least one NEXT cancellation filter to filter NEXT caused to said foreign modem by any of said native modems.

7. (Currently Amended) A communications system comprising:

a modem pool for communicating via a communications channel, said modem pool comprising a plurality of native modems operating at steady state;

an inactive foreign modem; and

at least one ~~NEXT~~ near-end cross-talk (NEXT) cancellation filter,

wherein said modem pool is operative to:

a) measure modem performance of any of said native modems;

b) activate said foreign modem in said modem pool at substantially said foreign modem's maximum data rate and at a power level that is below said foreign modem's normal operational power level;

c) allocate said at least one NEXT cancellation filter as a probe filter;

d) iteratively, until i) said foreign modem is operating at said foreign modem's normal operational power level, or ii) said modem performance of any of said native modems has degraded subsequent to activating said foreign modem:

d1) cancel, using said probe filter, NEXT caused to at least one of said native modems by said foreign modem;

d2) measure modem performance of any of said native modems; and

d3) if said modem performance of any of said native modems has not degraded subsequent to activating said foreign modem, increase said foreign modem's power level; and

e) if said modem performance of any of said native modems has degraded subsequent to activating said foreign modem, deactivate said foreign modem.

8. (Original) A system according to claim 7 wherein said foreign modem is additionally operative to synchronize to an optimal data transmission rate.

9. (Original) A system according to claim 7 wherein said at least one NEXT cancellation filter comprises a plurality of NEXT cancellation filters, and wherein said foreign modem is operative to activate any of said plurality of NEXT cancellation filters to filter NEXT caused to said foreign modem by any of said native modems.

10. (Currently Amended) A communications system comprising:

a modem pool for communicating via a communications channel, said modem pool comprising a plurality of native modems operating at steady state;

an inactive foreign modem; and

at least one ~~NEXT~~ near-end cross-talk (NEXT) cancellation filter,

wherein said modem pool is operative to:

a) measure modem performance of any of said native modems;

b) activate said foreign modem in said modem pool at substantially said foreign modem's maximum data rate and at a power level that is below said foreign modem's normal operational power level;

c) allocate said at least one NEXT cancellation filter as a probe filter;

d) iteratively, until i) said foreign modem is operating at said foreign modem's normal operational power level, or ii) said modem performance of any of said native modems has degraded subsequent to activating said foreign modem:

d1) cancel, using said probe filter, NEXT caused to at least one of said native modems by said foreign modem;

d2) measure modem performance of any of said native modems; and

d3) if said modem performance of any of said native modems has not degraded subsequent to activating said foreign modem, increase said foreign modem's power level; and

e) if said modem performance of any of said native modems has degraded subsequent to activating said foreign modem, decrease said power level of said foreign modem to a previous power level at which said modem performance of any of said native modems had not degraded.

11. (Original) A system according to claim 10 wherein said foreign modem is additionally operative to synchronize to an optimal data transmission rate.

12. (Original) A system according to claim 10 wherein said at least one NEXT cancellation filter comprises a plurality of NEXT cancellation filters, and wherein said foreign modem is operative to activate any of said plurality of NEXT cancellation filters to filter NEXT caused to said foreign modem by any of said native modems.